

***DETAILED ACTION***

1. This action is response to communication: amendment filed on 09/19/2008.
2. Claims 1-7 and 14-23 are currently pending in this application. Claims 1 and 14 are independent claims. Claims 8-13 have been cancelled.
3. No IDS was received for this application.

***Response to Arguments***

4. Applicant's arguments filed 09/19/2008 have been fully considered but they are moot in view of new ground(s) of rejection
5. The Applicants have amended the claims to recite that a connector, and not a card reader, connects the smart card to a telephone. This however, does not overcome the art. This makes the claims even more broad, and the Landry reference can be read differently.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 14, and 23 are rejected under 35 U.S.C. 102(e) as being unpatentable over Landry et al US Patent No. 6,687,350 (hereinafter Landry).

As per claim 1, Landry teaches a method for a second operation of authenticating a user and securing an online transaction over a telephone, comprising: providing a connector connecting a smart card to a telephone (Figure 2 item 30, with the analogue front-end unit; col. 5 lines 20-35); transmitting from the smart card at least an identification sequence for the user to an IRV server connected to a telephone line in the form of a modulated signal (col. 10 lines 25-30; col. 5 lines 1-22; col. 6 lines 5-29; Figures 2,3; also col. 5 lines 13-35, wherein the signal is modulated as it goes through modem 26); demodulating the identification sequence at the IVR server (It is inherent that the signal is demodulated, as a modulated signal must be demodulated in order for the data to be useful and processed; also occurs at the IVR server (col. 5 lines 1-10) ); and authenticating the user and the transaction at an application server receiving the demodulated identification sequence from the IVR server over a communication network wherein data processing required for generating, transmitting, and authenticating the user occur without data processing assistance from the connector (col. 8 line 45-65; col. 10 lines 1-35; Figure 5, and abstract, wherein the application server controls the functions of the smart card reader).

Claim 14 is rejected using the same basis of arguments used to reject claim 1 above. A card reader connected to a telephone is taught throughout the reference, such as in Landry Figure 1a and 1b. It is inherent that a telephone is connected to a

telephone line. An IVR server connected to the telephone line is taught throughout the reference, such as in Figures 1, 2, 3, and col. 5 lines 1-12.

As per claim 23, Landry teaches wherein the card reader is further integrated into the telephone handset (col. 2 lines 45-68).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landry as applied above, and further in view of Chang et al. US Patent No. 6,715,082 (hereinafter Chang).

As per claim 2, Landry teaches a credit card number in col. 1 lines 25-29, which is a unique number. However, Landry and Brown do not explicitly teach the use of one time keys on a smart card. These are well known in the art, as can be seen in Chang col. 2 lines 10-25.

At the time of the invention, it would have been obvious to include random one-time keys to be stored on smart cards. One of ordinary skill in the art would have been

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motivated to perform such an addition to increase security. This is taught by Chang in col. 2 lines 11-15.

As per claim 3, the one-time password taught by Chang in col. 2 lines 10-25 is a key used in a session. It is taught in Chang that this one time password/key is not transmitted to an authentication server, as it is only transmitted to an access server.

Claim 15 is rejected using the same basis of arguments used to reject claim 2 above.

Claim 16 is rejected using the same basis of arguments used to reject claim 3 above.

10. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landry and Chang as applied above, and further in view of Brinkmeyer et al. US Patent No. 5,619,573 (hereinafter Brink).

As per claim 4,, the Landry combination does not explicitly teach wherein the session key is a function of a previous key. However, this is taught by Brink, such as in col. 3 lines 60 to col. 4 line 25. This would be inherently known by an authentication server, as the authentication server needs to know the key in order to verify if it was valid or not.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include using a previously known key. One of ordinary skill in the art would

have been motivated to perform such an addition to create more security. As they are one way functions, it would be extremely difficult to determine the previous keys unless they were known. By using previous keys, it would increase security, as it would almost guarantee that the key was actually known by the user and the authentication server, and not a malicious middle man.

Claim 17 is rejected using the same basis of arguments used to reject claim 14 above.

11. Claims 5-7 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landry, Chang, and Brink as applied above, and further in view of Bruce Schneier's Applied Cryptography, 2<sup>nd</sup> Edition (1997), (hereinafter Schneier).

As per claims 5-7, the claims recite the use of encryption keys, decryption, one-way functions and authentication. These are well known in the art, as taught throughout Schneier, such as in pages 28-42. Pin codes are taught throughout Landry and Kia, and it would be obvious to encrypt PIN's, because PIN contains sensitive information, which should never be sent in the clear. Further, it is common practice that authentication is valid if PIN's match a PIN stored in a database. (that's how PIN's or passwords work). Further, databases holding security information is taught throughout Kia, such as in col. 2 lines 14-20 and in col. 3 lines 15-24 and col. 4 lines 29-37.

At the time of the invention, it would have been obvious to combine the teachings of Schneier with the Landry combination. One of ordinary skill in the art would have

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been motivated to perform such an addition to be able to provide a secure system. The Landry combination is already directed to secure online transactions, and Schneier teaches the details of this.

Claim 18-20, as best understood by the Examiner, are rejected using the same basis of arguments used to reject claims 507 above.

12. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being obvious over Landry and as applied above.

As per claim 21, the claim recites wherein the smart card is powered by the voltage provided by the telephone line. It is well known in the art that telephones are powered by the power flowing from telephone lines. Since the Smart Card reader is attached to the telephone, as taught in Landry, it would have been obvious to power a smart card that is connected to the phone using the voltage provided by the phone, as this would reduce the amount of more power sources and voltage lines. Further, Landry teaches that the smart card may be powered by the telephone set, in col. 7 lines 50-54. As already discussed, many phones are powered by the telephone lines.

As per claim 22, it is inherent that a smart card would transmit signals via contacts. Although the Landry combination does not explicitly teach ISO contacts, it would have been obvious to do so, if not inherent. As Landry already teaches utilizing contacts, it would have been obvious to utilize ISO contacts, as ISO contacts are well

known in the art and used throughout industry. It would have been obvious incorporate ISO contacts for ease of use.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. GEE whose telephone number is (571)272-6431. The examiner can normally be reached on M-F, 7:00 am to 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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